

We claim:

1. A support device for an optical subassembly, providing control of the orientation of said optical subassembly, comprising:

a housing having an inside for supporting said optical subassembly;
one or more pads mounted on the inside of said housing;
the inside of said housing being adapted to support the underside of said pads;
the topside of said pads being adapted to support said subassembly.

2. The support device of claim 1 wherein said pads control the vertical position of the subassembly.

3. The support device of claim 1 wherein said pads are spaced around the inside of said housing so as to provide support for the corners of the subassembly.

4. The support device of claim 1 wherein the spaces between said pads form grooves along the inside of said housing.

5. The support device of claim 4 wherein said grooves are adapted to receive solder material, or epoxy, or a combination of solder material and epoxy.

6. The support device of claim 5 wherein the volume of solder material, or epoxy, or combined solder material and epoxy does not exceed the volume of the grooves formed by said pads.

7. A device for improving the laser power distribution of a laser emitter package comprising:

an optical subassembly;
a housing having an inside for supporting said optical subassembly;

said optical subassembly having footpads attached to a bottom thereof;
said optical subassembly and said footpads being adapted to fit inside said housing and to rest on an inside floor of said housing;
the footpads being at spaced separation from one another and the spaces between the said footpads being adapted to receive solder.

8. The device of claim 7 wherein said footpads raise said optical assembly above the inside floor of said housing.
9. The device of claim 7 wherein said footpads control the vertical position of the optical assembly.
10. The device of claim 8 wherein the spaces between said footpads form grooves along the inside floor of said housing.
11. The device of claim 10 wherein the grooves are adapted to receive solder material.
12. The device of claim 11 wherein the volume of said solder material does not exceed the volume of the grooves formed by said footpads.
13. A method for minimizing optical subassembly tilt error including:
 - forming at least one groove in a housing for the subassembly;
 - predetermining a volume of solder to be placed into the groove by
 - making the solder into a block form;
 - making a volume of the block equal to a volume of the groove;
 - making a vertical height of the block higher than a vertical height of the groove;
 - placing the predetermined volume of solder into said groove;

placing said subassembly on top of the block of solder with a downward force against the solder; and

applying heat to a bottom of the housing to liquefy the solder.

14. The method of claim 13 wherein the downward force applied to the solder is sufficiently large to break the oxidation layer in the surface of the solder.

15. The method of claim 13 wherein the heat applied the bottom of the housing is higher than the melting point of the solder.

16. The method of claim 13 wherein the surface of the groove and the bottom of the subassembly are plated with gold.